Applicants:	Robert J. Rappold III	§	Art Unit:	2169	
		§			
Serial No.:	10/657,916	§	Confirmation No.:	5111	
		§			
Filed:	09/09/2003	§	Examiner:	Dung K. Chau	
		§			
For:	EXTENSIBLE AGENT	§	Atty. Dkt. No.:	200901148-5	
	SYSTEM AND METHOD	§		(HPC.0836US)	
		§			
		§			

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

<u>APPEAL BRIEF PURSUANT TO 37 C.F.R § 41.37</u>

Sir:

The final rejection of claims 1-45 is hereby appealed.

I.   REAL PARTY IN INTEREST

The real party in interest is the Hewlett-Packard Development Company, LP. The

Hewlett-Packard Development Company, LP, a limited partnership established under the laws of

the State of Texas and having a principal place of business at 11445 Compaq Center Drive West,

Houston, TX 77707, U.S.A. (hereinafter "HPDC"). HPDC is a Texas limited partnership and is

a wholly-owned affiliate of Hewlett-Packard Company, a Delaware Corporation, headquartered

in Palo Alto, CA. The general or managing partner of HPDC is HPQ Holdings, LLC.

II.   RELATED APPEALS AND INTERFERENCES

None.

III.   STATUS OF THE CLAIMS

Claims 1-45 have been finally rejected and are the subject of this appeal.

IV.   STATUS OF AMENDMENTS

No amendment after the final rejection of March 2, 2009 has been submitted. Therefore, all amendments have been entered.

V.   SUMMARY OF THE CLAIMED SUBJECT MATTER

The following provides a concise explanation of the subject matter defined in each of the independent claims involved in the appeal, referring to the specification by page and line number and to the drawings by reference characters, as required by 37 C.F.R. § 41.37(c)(1)(v). Each element of the claims is identified by a corresponding reference to the specification and drawings where applicable. Note that the citation to passages in the specification and drawings for each claim element does not imply that the limitations from the specification and drawings should be read into the corresponding claim element.

Independent claim 1 recites a method for providing an extensible agent (Fig. 1:130) comprising:

receiving a request (Fig. 1:135) from a client (Fig. 1; Spec., p. 9, ln. 7-10);

determining one or more environment characteristics (Spec., p. 14, ln. 24 – p. 15, ln. 1);

dynamically selecting at least a portion of a plurality of agent components (Fig. 1:131) based on the client request and the environment characteristics, the at least a portion of the plurality of agent components being selected using a relational knowledgebase that comprises a properties table (Fig. 7:720) of properties for dynamic agent component selection and an actions table (Fig. 7:710) of actions for processing (Spec., p. 12, ln. 14-31; p. 41, ln. 1- p. 42, ln. 4; p. 46, ln. 7 – p. 47, ln. 7); and

processing the client request using the selected agent components and according to one or more actions of the actions table that are planned and scheduled (Spec., p. 24, ln. 2-8; p. 31, ln. 26 – p. 32, ln. 3).

Independent claim 16 recites software for providing an extensible agent (Fig. 1:130), the software being embodied in a computer-readable medium and when executed operable to:

> receive a request (Fig. 1:135) from a client (Fig. 1; Spec., p. 9, ln. 7-10);

> determine one or more environment characteristics (Spec., p. 14, ln. 24 – p. 15, ln. 1);

> dynamically select at least a portion of a plurality of agent components (Fig. 1:131) based on the client request and the environment characteristics, the at least a portion of the plurality of agent components being selected using a relational knowledgebase that comprises a properties table (Fig. 7:720) of properties for dynamic agent component selection and an actions table (Fig. 7:710) of actions for processing (Spec., p. 12, ln. 14-31; p. 41, ln. 1- p. 42, ln. 4; p. 46, ln. 7 – p. 47, ln. 7); and

> process the client request using the selected agent components and according to one or more actions of the actions table that are planned and scheduled (Spec., p. 24, ln. 2-8; p. 31, ln. 26 – p. 32, ln. 3).

Independent claim 31 recites a server comprising:

> a memory operable to store a database and a knowledgebase, the knowledgebase comprising a plurality of component selection patterns (Spec., p. 7, ln. 17-20); and

> one or more processors (Fig. 1:107) collectively operable to:

>> receive a request (Fig. 1:135) from a client (Fig. 1; Spec., p. 9, ln. 7-10);

>> determine one or more environment characteristics (Spec., p. 14, ln. 24 – p. 15, ln. 1);

>> dynamically select at least a portion of a plurality of agent components (Fig. 1:131) based on one of the plurality of component selection patterns, the pattern selected based on the client request and the environment characteristics, the at least a portion of the plurality of agent components being selected using the knowledgebase that comprises a properties table (Fig. 7:720) of properties for dynamic agent component selection and an actions table (Fig. 7:710) of actions for processing (Spec., p. 12, ln. 14-31; p. 41, ln. 1- p. 42, ln. 4; p. 46, ln. 7 – p. 47, ln. 7); and

>> access data in the database using the selected agent components and according to one or more actions of the actions table that are planned and scheduled (Spec., p. 24, ln. 2-8; p. 31, ln. 26 – p. 32, ln. 3).

VI.   GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

A.   Claims 1-45 were rejected under 35 U.S.C. § 103(a) as unpatentable over Ivanov (U.S. Patent Publication No. 2004/0215604) in view of Britton (U.S. Patent No. 6,279,030).

VII.   ARGUMENT

A.   Claims 1-45 were rejected under 35 U.S.C. § 103(a) as unpatentable over Ivanov (U.S. Patent Publication No. 2004/0215604) in view of Britton (U.S. Patent No. 6,279,030).

1.   Claims 1-45.

It is respectfully submitted that the obviousness rejection of claim 1 over Ivanov and Britton is erroneous.

To make a determination under 35 U.S.C. § 103, several basic factual inquiries must be performed, including determining the scope and content of the prior art, and ascertaining the differences between the prior art and the claims at issue. *Graham v. John Deere Co.*, 383 U.S. 1, 17, 148 U.S.P.Q. 459 (1965). Moreover, as held by the U.S. Supreme Court, it is important to identify a reason that would have prompted a person of ordinary skill in the art to combine reference teachings in the manner that the claimed invention does. *KSR International Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1741, 82 U.S.P.Q.2d 1385 (2007).

The Examiner conceded that Ivanov fails to disclose the following elements of claim 1:

- dynamically selecting at least a portion of a plurality of agent components based on the client request and the environment characteristics, the at least a portion of the plurality of agent components being selected using a relational knowledgebase that comprises a properties table of properties for dynamic agent component selection and an actions table of actions for processing; and

- processing the client request using the selected agent components and according to one or more actions of the actions table that are planned and scheduled.

3/2/2009 Office Action at 3. However, the Examiner cited Britton as purportedly disclosing the claimed subject matter missing from Ivanov. *Id.* at 3-4. With respect to the "dynamically

selecting" element of claim 1, the Examiner cited the following passages of Britton: Fig. 4; column 3, line 40 – column 4, line 42; column 7, lines 26-34; column 9, line 56 – column 10, line 12.

The cited passage in columns 3 and 4 of Britton refers to dynamically selecting a program component based on current values of changeable attributes. As explained by Britton, multiple versions of a program component are available, and a specific version can be dynamically selected from the available versions based on current values of changeable attributes. Britton, 3:44-49. Selecting a program component dynamically is based upon a user's authorization privileges, current working environment, preferences, network connection type, status, or some combination of the foregoing. *Id.*, 3:49-53. Britton also notes that the values of the changeable attributes can be provided from a number of sources, including the user, configuration mechanisms of a user's machine, a network gateway, or a network database. However, nowhere in the passage cited in columns 3 and 4 of Britton is there any hint of dynamically selecting at least a portion of a plurality of agent components based on a client request and environment characteristics, where the at least a portion of the plurality of agent components is selected using a relational knowledgebase that comprises a properties table of properties for dynamic agent component selection **and an actions table of actions for processing**.

The cited column 7 passage (column 7, lines 26-34) of Britton refers to software that dynamically selects and downloads components operating on a server in a network as one or more modules that are invoked in response to a request for a component. The cited passage in columns 9 and 10 of Britton (column 9, line 56 – column 10, line 12) refers to a set of predicate records created for each component that has multiple versions, where each predicate record

specifies one or more predicates related to selection of a version of a component, and a reference that can be used to retrieve that version from a repository. As further explained by Britton, a predicate is preferably specified as an attribute type in an attribute value pair. Britton, 9:64-65. Britton also notes that when multiple predicates are specified in one predicate record, Boolean logic is applied to determine if that predicate record is satisfied. *Id.*, 10:3-4. In addition, Britton notes that the order of predicate evaluation within a predicate record can be specified. *Id.*, 10:8-9. None of the passages cited in columns 7, 9, and 10 of Britton provide any teaching or hint of the "dynamically selecting" element of claim 1, which specifies that at least a portion of the plurality of agent components is selected using a relational knowledgebase that comprises a properties table as well as an actions table of actions for processing.

Moreover, it is also noted that the "processing" element of claim 1 specifies that the client request is processed using the selected agent components **and according to one or more actions of the actions table** that are planned and scheduled. With respect to the "processing" element of claim 1, the Examiner cited the following passage of Britton: column 15, line 32 – column 17, line 48. 3/2/2009 Office Action at 4. There is absolutely no mention made in this passage of processing a client request using the selected agent components **and according to one or more actions of the action table** that is part of the relational knowledgebase recited in column 1. The passage in columns 15-17 of Britton cited by the Examiner refers to a servlet version satisfying predicate records for a desired function that would be invoked by a server. However, a servlet version satisfying predicate records for a desired function is completely different from processing a client request according to one or more actions of an actions table that is part of a relational knowledgebase.

In view of the foregoing, it is clear that even if Ivanov and Britton could be hypothetically combined, the hypothetical combination of the references would not have led to the claimed subject matter.

Moreover, a person of ordinary skill in the art would not have been prompted to combine the teachings of Ivanov and Britton. As allegedly providing a reason for the combination, the Examiner states the following:

> It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Ivanov and Britton et al. to dynamically select a program component and process the selected program component based on user request, because it would allow the software to be optimized for particular users or groups of users, or particular environments of hardware and/or software, while still providing applications that are usable by a wide range of users in a wide range of operating environments.

3/2/2009 Office Action at 4.

Appellant respectfully submits that the Examiner's statement merely provides conclusory assertions as to the reasons for the combination, which certainly does not satisfy the stringent standards for establishing a case of obviousness. "Rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *KSR,* 127 S. Ct. at 1741. The Examiner has not provided an adequate explanation (without using Appellant's claims as a blueprint) as to why one of ordinary skill in the art at the time of invention would have combined the various teachings of the references in the manner the Examiner proposed.

Ivanov apparently discloses a query processing technique. The cited portions of Britton disclose dynamically selecting a program component based upon changeable attributes. It does not seem that the purported teachings of Britton cited by the Examiner (i.e., dynamically selecting a program component based upon changeable attributes) has any apparent relation to

the alleged teachings of Ivanov (i.e., query processing) the Examiner is attempting to combine with Britton. Therefore, Appellant submits that this proposed advantage of Britton does not appear to support the particular combination/modification the Examiner is attempting to construct.

In view of the foregoing, it is clear that the obviousness rejection of claim 1 and its dependent claims is erroneous.

The obviousness rejection of independent claims 16 and 31 and their respective dependent claims are also similarly erroneous.

Reversal of the final rejection of the above claims is respectfully requested.

CONCLUSION

In view of the foregoing, reversal of all final rejections and allowance of all pending claims is respectfully requested.

Respectfully submitted,

Date: July 28, 2009

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VIII. **APPENDIX OF APPEALED CLAIMS**

The claims on appeal are:

1 1. A method for providing an extensible agent comprising:

2 receiving a request from a client;

3 determining one or more environment characteristics;

4 dynamically selecting at least a portion of a plurality of agent components based on the

5 client request and the environment characteristics, the at least a portion of the plurality of agent

6 components being selected using a relational knowledgebase that comprises a properties table of

7 properties for dynamic agent component selection and an actions table of actions for processing;

8 and

9 processing the client request using the selected agent components and according to one or

10 more actions of the actions table that are planned and scheduled.

1 2. The method of Claim 1, each agent component comprising an object defined in an

2 object-oriented programming language.

1 3. The method of Claim 2, further comprising instantiating the selected agent

2 component objects.

1 4. The method of Claim 1, further comprising:

2 selecting one or more characteristics of the request; and

3 wherein dynamically selecting at least a portion of a plurality of agent components based

4 on the client request comprises selecting at least a portion of agent components based on the

5 selected request characteristics.

1 5. The method of Claim 4, further comprising storing the selected request

2 characteristics in one of the selected agent components.

1   6.   The method of Claim 5, one of the selected agent components comprising
2 embedded structured query language (SQL) operable to query a database.

1   7.   The method of Claim 1, the client comprising a remote client and the client
2 request is received through a web server.

1   8.   The method of Claim 7, further comprising communicating a web-enabled
2 message to the remote client based on the processed request.

1   9.   The method of Claim 2, at least a portion of the agent components comprising
2 objects based on a common parent class, the common parent class comprising component
3 messaging logic and component locating logic.

1   10.   The method of Claim 1, wherein at least a portion of the plurality of agent
2 components comply with Foundation for Intelligent Physical Agents (FIPA) standards.

1   11.   The method of Claim 3, further comprising registering each instantiated agent
2 component object.

1   12.   The method of Claim 1, wherein dynamically selecting at least a portion of a
2 plurality of agent components based on the client request and the environment characteristics
3 comprises:
4   automatically retrieving variable properties from a knowledgebase using the client
5 request and the environment variables; and
6   selecting at least a portion of the plurality of agent components based on the retrieved
7 variable properties.

1   13.   The method of Claim 1, wherein dynamically selecting at least a portion of the
2 plurality of agent components based on the client request and the environment characteristics
3 comprises selecting at least a portion of the plurality of agent components based on a JAVA
4 properties file.

1   14.   The method of Claim 1, the selected portion of the plurality of agent components
2   operable to be executed in a non-web-enabled environment and a web-enabled environment.

1   15.   The method of Claim 1, further comprising:
2   migrating the plurality of agent components to an environment prior to receiving the
3   request from the client; and
4   wherein processing the client request using the selected agent components comprises
5   automatically processing the client request using the selected agent components.

1   16.   Software for providing an extensible agent, the software being embodied in a
2   computer-readable medium and when executed operable to:
3   receive a request from a client;
4   determine one or more environment characteristics;
5   dynamically select at least a portion of a plurality of agent components based on the
6   client request and the environment characteristics, the at least a portion of the plurality of agent
7   components being selected using a relational knowledgebase that comprises a properties table of
8   properties for dynamic agent component selection and an actions table of actions for processing;
9   and
10   process the client request using the selected agent components and according to one or
11   more actions of the actions table that are planned and scheduled.

1   17.   The software of Claim 16, each agent component comprising an object defined in
2   an object-oriented programming language.

1   18.   The software of Claim 17, further operable to instantiate the selected agent
2   component objects.

1   19.   The software of Claim 16, further operable to select one or more characteristics of

2   the request and wherein the software operable to dynamically select at least a portion of a

3   plurality of agent components based on the client request comprises the software operable to

4   select at least a portion of agent components based on the selected request characteristics.

1   20.   The software of Claim 19, further operable to store the selected request

2   characteristics in one of the selected agent components.

1   21.   The software of Claim 20, one of the selected agent components comprising

2   embedded structured query language (SQL) operable to query a database.

1   22.   The software of Claim 16, the client comprising a remote client and wherein the

2   client request is received through a web server.

1   23.   The software of Claim 22, further operable to communicate a web-enabled

2   message to the remote client based on the processed request.

1   24.   The software of Claim 17, at least a portion of the agent components comprising

2   objects based on a common parent class, the common parent class comprising component

3   messaging and component location logic.

1   25.   The software of Claim 16, wherein at least a portion of the plurality of agent

2   components comply with Foundation for Intelligent Physical Agents (FIPA) standards.

1   26.   The software of Claim 18, further operable to register each instantiated agent

2   component object.

1   27.   The software of Claim 16, wherein the software operable to dynamically select at

2 least a portion of a plurality of agent components based on the client request and the environment

3 characteristics comprises the software operable to:

4   retrieve variable properties from a knowledgebase using the client request and the

5 environment variables; and

6   select at least a portion of the plurality of agent components based on the retrieved

7 variable properties.

1   28.   The software of Claim 16, wherein the software operable to dynamically select at

2 least a portion of a plurality of agent components based on the client request and the environment

3 characteristics comprises the software operable to select at least a portion of the plurality of

4 agent components based on a JAVA properties file.

1   29.   The software of Claim 16, the selected portion of the plurality of agent

2 components operable to be executed in a non-web-enabled environment and a web-enabled

3 environment.

1   30.   The software of Claim 16, further operable to:

2   migrate the plurality of agent components to an environment prior to receiving the

3 request from the client; and

4   wherein the software operable to process the client request using the selected agent

5 components comprises the software operable to automatically process the client request using the

6 selected agent components.

1   31.   A server comprising:

2   a memory operable to store a database and a knowledgebase, the knowledgebase

3 comprising a plurality of component selection patterns; and

4   one or more processors collectively operable to:

5   receive a request from a client;

6   determine one or more environment characteristics;

7   dynamically select at least a portion of a plurality of agent components based on

8 one of the plurality of component selection patterns, the pattern selected based on the client

9 request and the environment characteristics, the at least a portion of the plurality of agent

10 components being selected using the knowledgebase that comprises a properties table of

11 properties for dynamic agent component selection and an actions table of actions for processing;

12 and

13   access data in the database using the selected agent components and according to

14 one or more actions of the actions table that are planned and scheduled.

1   32.   The server of Claim 31, each agent component comprising an object defined in an

2 object-oriented programming language.

1   33.   The server of Claim 32, the processors further operable to instantiate the selected

2 agent component objects.

1   34.   The server of Claim 31, the processors further operable to select one or more

2 characteristics of the request and wherein the processors operable to dynamically select at least a

3 portion of a plurality of agent components based on the client request comprise the processors

4 operable to select at least a portion of agent components based on the selected request

5 characteristics.

1   35.   The server of Claim 34, the processors further operable to store the selected

2 request characteristics in one of the selected agent components.

1 36. The server of Claim 35, wherein accessing data in the database using the selected
2 agent components is performed by one of the selected agent components comprising embedded
3 structured query language (SQL).

1 37. The server of Claim 31, the client comprising a remote client and wherein the
2 client request is received through a web server.

1 38. The server of Claim 37, the processors further operable to communicate a web-
2 enabled message to the remote client based on the processed request.

1 39. The server of Claim 32, at least a portion of the agent components comprising
2 objects based on a common parent class, the common parent class comprising component
3 messaging and component location logic.

1 40. The server of Claim 31, wherein at least a portion of the plurality of agent
2 components comply with Foundation for Intelligent Physical Agents (FIPA) standards.

1 41. The server of Claim 33, the processors further operable to register each
2 instantiated agent component object.

1 42. The server of Claim 31, wherein the processors operable to dynamically select at
2 least a portion of a plurality of agent components based on the client request and the environment
3 characteristics comprise the processors operable to:
4   retrieve variable properties from the knowledgebase using the client request and the
5 environment variables;
6   selecting one of the component selection patterns based on the retrieved variable
7 properties; and
8   select at least a portion of the plurality of agent components using the component
9 selection pattern.

1   43.   The server of Claim 31, wherein the processors operable to dynamically select at

2 least a portion of a plurality of agent components based on the client request and the environment

3 characteristics comprise the processors operable to select at least a portion of the plurality of

4 agent components based on a JAVA properties file.

1   44.   The server of Claim 31, the selected portion of the plurality of agent components

2 operable to be executed in a non-web-enabled environment and a web-enabled environment.

1   45.   The server of Claim 36, the processors further operable to:

2   migrate the plurality of agent components to an environment prior to receiving the

3 request from the client; and

4   wherein the processors operable to process the client request using the selected agent

5 components comprise the processors operable to automatically process the client request using

6 the selected agent components.

IX. <u>EVIDENCE APPENDIX</u>

None.

X.   <u>RELATED PROCEEDINGS APPENDIX</u>

None.